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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,762	03/17/2000	Paramasiviah Harshavardhana	20-1-1-1-8-1	5011

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EXAMINER	
DO, NHAT Q	

ART UNIT	PAPER NUMBER
2663	10

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/528,762	HARSHAVARDHANA ET AL.	
	Examiner	Art Unit	
	Nhat Do	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13-32 and 34-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-32 and 34-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 12/08/03 have been fully considered but they are not persuasive.

2. Applicants argue that Chaudhuri fails to disclose "said at least one signaling path transits non-conforming network elements" (Remarks page 12, lines 7-9) because, in accordance with the present invention, the non-conforming network elements are older generation network elements or from different manufacturers; and the non-conforming elements do not provide the necessary monitoring, signaling and cross-connect functionality and database to participate activities in real-time restoration (Remarks page 11, last paragraph).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the non-conforming elements do not provide the necessary monitoring, signaling and cross-connect functionality and database to participate activities in real-time restoration) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, Chaudhuri discloses elements (each of node 12A-12G) in the network are from variety of manufacturers (Col. 3, lines 17-25). The examiner is in the position the elements (nodes 12F, and 12G) of the (signaling) paths rs, and tu are non-

conforming when the elements (nodes 12F, and 12G) are from one manufacturer and the other elements (other nodes) of the network are from another manufacturer.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 8-11, 16-20, and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,324,162 to Chaudhuri.

References appear in parenthesis.

Regarding to claim 1, Chaudhuri discloses a mesh network performing:

Detecting a restorable failure along said service path (node 12E detects failure indication sent from node 12A (Col. 6, lines 35-38); and

Signaling the restoration of said failure using at least one signaling path that occupies the same bandwidth as said pre-computed restoration path, each of said at least one signaling paths being replaced by a segment of said pre-computed restoration path after signaling is complete and wherein said at least one signaling path transits said at least one non-conforming network element (signaling restoration using the restoration path segments pq, rs, and tu, which are replaced as restoration path segments after signaling (Col. 12, line 54-col. 13, line 10). Since the signaling path and

restoration path are the same, therefore, the bandwidth is the same; wherein nodes 12F, and 12G disclosed on Col. 1 page 12, lines 54-65 by Chaudhuri are considered the claimed non-conforming elements (when the manufacturer of the nodes are different from that of the others)).

Regarding to claims 2, and 3, Chaudhuri discloses the network is a SONET/SDH network (Col. 1, lines 55-62).

Regarding to claim 4, Chaudhuri discloses the network is an optical network having nodes capable of accessing digital overhead on said paths (the network is an optical network (Col. 3, lines 11-17). Due to the nature of optical network, it is inherent that the network comprises nodes capable of accessing overhead).

Regarding to claim 5, Chaudhuri discloses the signaling step is initiated by an end node along said service path (the signaling is initiated by node 12E, which is an end node (Col. 3, lines 28-35; col. 6, lines 35-38)).

Regarding to claim 8, Chaudhuri discloses a signaling message is transmitted in a payload portion of at least one of signaling path (the signaling information is placed after K I, and K2 (Col. 9, lines 30-42), which is the payload portion of the SONET frame).

Regarding to claim 9, Chaudhuri discloses a signaling message (recovery request) identifies said service path having said failure and requests the establishment of said pre-computed restoration path (the recovery request sent from node 12E includes identification of the failed link (Col. 12, line 49)).

Regarding to claim 10, Chaudhuri discloses the signaling message is relayed from one restoration node to another node in the overhead or payload of said at least one

signaling path, based on an identity of a failed service path identified in said signaling message (the message is relayed form node to node in the restoration path based on the identification of the failed path (Col. 12, line 54-col. 13, line 5).

Regarding to claim 11, Chaudhuri discloses establishing a cross-connect that replaces said at least one signaling path with a segment of the pre-computed restoration path requested in the signaling message (using the path segments pq, rs, and tu to reroute data after the signaling completes (Col. 13, lines 1-10)), said establishing step being performed after relaying said signaling message to a subsequent restoration node (the signaling is performed by relaying message from node to node (Col. 12. lines 54-65)).

Regarding to claim 16, Chaudhuri discloses customer path terminating equipment is not part of a restorable network, and wherein said signaling step is initiated only when the fault causing said path failure is located within said restorable network (from figure 3, there is no customer path terminating equipment in the restoration network. Consequently, it is inherent that the signaling initiated only when the failure is within the (restoration) network).

Regarding to claim 17, Chaudhuri discloses adjacent restoration nodes in said network initiate (nodes 12F and 12G use the restoration path for transmitting control signal (Col. 12, lines 7-65)) and terminate (after verifying, use the restoration path for rerouting data (Col. 13, lines 4-12) paths that are used for signaling in spare network bandwidth (since the links are reserved for restoration, it is considered spared), wherein said signaling paths remain in place for signaling until replaced by said pre-computed

restoration paths used to restore service (use the restoration path for rerouting data after verifying (Col. 13, lines 4-12).

Regarding to claim 18, Chaudhuri discloses end nodes are identified for said service path when said service path is initially provisioned (the end nodes 12E, and 12B are identified for the path initially (Col. 3, lines 28-37)).

Regarding to claim 19, Chaudhuri discloses end nodes monitor for said path failures and initiate restoration signaling only when said path failure is due to a fault located between the end nodes (the initiating recovery when a failure located between the end nodes (Col. 6, lines 20-12D)).

Regarding to claim 20, Chaudhuri discloses end nodes formulate a restoration message uniquely identifying said failed service path and requesting set-up of said pre-computed restoration path, and route said message to a subsequent restoration node (the end node formulates a message comprises: fail path ID (line 49), request type (line 40), pre-computed restoration path (42-45), and routes the message to node 12F (line 54)).

Regarding to claim 21, Chaudhuri discloses end nodes permit traffic to flow out of the network on a restored path only after verifying both end node-to-end node connectivity and an identity of the restored path (permit rerouting only after verifying the restored path (Col. 13, lines 1-15)).

Regarding to claim 43, further to the rejection of claim 1, Chaudhuri discloses using a computer to implement the restoration (Col. 3, lines 47-57). Therefor it is inherent that the system comprising:

A memory for storing computer readable code; and

A processor performs the restoration procedure.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 6, 7, 13-15, 22-32, 34-42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri as applied to claim 1 above, and further in view of admitted prior art.

Regarding to claims 6, 7, and 13-15, Chaudhuri fails to disclose to determine whether the failure is restorable or non-restorable in activating the recovery. The admitted prior art disclose the ANSI Tandem Connection Maintenance standard indicates out-of-network failure (non-restorable failure) by placing a flag in the path overhead in order to prevent the nodes to initiate path restoration (Page 12, last paragraph). A skilled artisan would have been motivated to apply the restoration technique of the ANSI Tandem Connection Maintenance standard in Chaudhuri in order to avoid initiating path restoration when failure occurs outside the network.

Therefore it would have been obvious to a person having ordinary skill in the art by the time the invention was made to determine whether the failure is restorable or non-restorable in activating the recovery.

Regarding to claim 22, further to the rejection of claims 1, and 6, Chaudhuri disclose: connecting the pre-computed path (Col. 12, and 13).

Regarding to claims 23-32, and 34-42, the claims are rejected because the claims are identical to 2-21, which are taught by Chaudhuri (and admitted prior art) as disclosed above.

Regarding to claim 44, further to the rejection of claims 43, and 6, Chaudhuri disclose: connecting the pre-computed path (Col. 12, and 13).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhat Do whose telephone number is (703) 305-5743. The examiner can normally be reached on 9:00 AM - 6:00 PM (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nhat Do
Examiner
Art Unit 2663

ND

February 13, 2004.

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 2/17/04